WHAT IS CLAIMED IS:

1. A method for predicting long term non-progression in an HIV-infected patient comprising determining whether the patient exhibits an HLA-Cw7-restricted CTL response.

2. The method of claim 1, wherein determining comprises:

(a) obtaining a cell from the patient, wherein the cell is selected from a group consisting of a peripheral blood mononuclear cell (PMBC), a mucosal lymphocyte, a lymph node cell, and a spleen cell;

(b) exposing the cell to an HLA-Cw7-expressing target cell; and

(c) assaying for an HLA-Cw7-restricted CTL response.

3. The method of claim 2, wherein the target cell presents at least a first HIV polypeptide.

4. The method of claim 3, wherein the HIV polypeptide is delivered to the target cell by infection of the target cell with a viral vector expressing said first HIV polypeptide.

5. The method of claim 4, wherein the viral vector is selected from the group consisting of vaccinia virus, adenovirus, herpesvirus, retrovirus, adeno-associated virus and lentivirus.

6. The method of claim 2, wherein the target cell is from an autologous B cell line.

7. The method of claim 2, wherein the target cell is a dendritic cell.

8. The method of claim 7, wherein the dendritic cell is an autologous dendritic cell.

9. The method of claim 2, wherein the target cell is an MHC-matched cell.

10. The method of claim 3, wherein the first HIV polypeptide is delivered to the target cell by pulsing said cells with the polypeptide.

11. The method of claim 3, wherein the first HIV polypeptide is delivered to the target cell by transfecting said cells with an expression construct comprising a polynucleotide encoding an HIV polypeptide comprising an HIV CTL epitope, wherein said polynucleotide is under the transcriptional control of a promoter.

12. The method of claim 10, wherein the first HIV polypeptide is an envelope polypeptide or a fragment thereof.

13. The method of claim 12 wherein said polypeptide is gp160.

14. The method of claim 10, wherein the first HIV polypeptide is a gag polypeptide or a fragment thereof.

15. The method of claim 10, wherein the first HIV polypeptide is a synthetic peptide.

16. The method of claim 15, wherein the peptide is of 11 to 25 residues in length and comprises a sequence YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, or VYYGVPVWKEA.

17. The method of claim 3, wherein the target cell presents a plurality of HIV polypeptides.

18. The method of claim 17, wherein the plurality of HIV polypeptides comprises two different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ or VYYGVPVWKEA.

19. The method of claim 17, wherein the plurality of HIV polypeptides comprises three different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ and VYYGVPVWKEA.

20. The method of claim 15, wherein the peptide is of 11 to 25 residues in length and comprises a sequence YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

21. The method of claim 17, wherein the plurality of HIV polypeptides comprises two different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

22. The method of claim 21, wherein the plurality of HIV polypeptides comprises three different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

23. The method of claim 22, wherein the plurality of HIV polypeptides comprises four different peptides comprising, individually, the sequences

YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

24. The method of claim 23, wherein the plurality of HIV polypeptides comprises five different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

25. The method of claim 24, wherein the plurality of HIV polypeptides comprises six different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, and GTGPCTNVSTVQC.

26. The method of claim 2, wherein the CTL response is assayed by chromium release from a labeled target cell.

27. The method of claim 2, wherein the CTL response is assayed by production of γ-interferon.

28. The method of claim 2, wherein the CTL response is assayed by tetramer assay.

29. The method of claim 2, wherein the CTL response is from a $CD4^+$ or $CD8^+$ cell.

30. The method of claim 1, wherein the HIV is HIV-1.

31. The method of claim 2, wherein the cell is stimulated with phytohemagglutinin, anti-CD3, or HIV polypeptides or peptides.

32. A method of preventing an HIV-infected subject from developing AIDS comprising:

(a) determining whether said subject exhibits an HLA-Cw7-restricted CTL response; and if so

(b) administering to said subject a composition comprising a first HIV polypeptide comprising an HIV CTL epitope.

33. The method of claim 32, wherein said first HIV polypeptide is an envelope polypeptide or a fragment thereof.

34. The method of claim 33, wherein said polypeptide is gp160.

35. The method of claim 32, wherein said first HIV polypeptide is a gag polypeptide or fragment.

36. The method of claim 32, wherein said first HIV polypeptide is a synthetic peptide.

37. The method of claim 36, wherein said synthetic peptide is of 11 to 25 residues in length and comprises the sequence YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ or VYYGVPVWKEA.

38. The method of claim 37, wherein said composition comprises a plurality of HIV polypeptides.

39. The method of claim 38, wherein the plurality of HIV polypeptides includes two different peptides comprising, individually, the sequence YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ or VYYGVPVWKEA.

40. The method of claim 38, wherein the plurality of HIV polypeptides includes three different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ and VYYGVPVWKEA.

41. The method of claim 36, wherein the peptide is of 11 to 25 residues in length and comprises a sequence YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

42. The method of claim 38, wherein the plurality of HIV polypeptides comprises two different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

43. The method of claim 42, wherein the plurality of HIV polypeptides comprises three different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

44. The method of claim 43, wherein the plurality of HIV polypeptides comprises four different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ,

VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

45. The method of claim 44, wherein the plurality of HIV polypeptides comprises five different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

46. The method of claim 45, wherein the plurality of HIV polypeptides comprises six different peptides comprising, individually, the sequences YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, and GTGPCTNVSTVQC.

47. The method of claim 32, wherein said first HIV polypeptide is coupled to a carrier molecule.

48. The method of claim 47, wherein said carrier molecule is KLH or BSA.

49. The method of claim 32, wherein said composition further comprises an adjuvant.

50. The method of claim 49, wherein said adjuvant is selected from a group consisting of lipids, toxins, cytokines, oligonucleotides and bacterial DNA.

51. The method of claim 32, further comprising administering AZT to said subject.

52. The method of claim 32, further comprising HAART.

53. The method of claim 32, wherein the subject does not exhibit an HLA-Cw7-restricted CTL response, further comprising:

(c) determining if the subject expresses the HLA-Cw7 haplotype; if so

(d) eliciting said response.

54. The method of claim 53, wherein eliciting said response comprises administering to said subject a therapeutically effective amount of α- or γ-interferon, whereby the level of HLA-Cw7 haplotype expression increases.

55. The method of claim 53, wherein determining expression of the HLA-Cw7 haplotype comprises a serological assay using an antibody that recognizes an HLA-Cw7 epitope.

56. The method of claim 53, wherein determining expression of the HLA-Cw7 haplotype comprises performing a nucleic acid amplification reaction, wherein a region within the coding sequence of HLA-Cw7 is amplified.

57. The method of claim 32, wherein the HIV is HIV-1.

58. A method for preventing HIV infection in an uninfected subject comprising:

(a) determining whether said subject has an HLA-Cw7 haplotype; and if so,

(b) administering to said subject a composition comprising a first HIV polypeptide comprising an HIV CTL epitope.

59. The method of claim 58, wherein the HIV is HIV-1.

60. The method of claim 58, wherein said first HIV polypeptide is an envelope polypeptide or gag polypeptide, or a fragment thereof.

61. The method of claim 58, wherein said first HIV polypeptide is a synthetic peptide.

62. The method of claim 61, wherein said synthetic peptide is of 11 to 25 residues in length and comprises the sequence YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ or VYYGVPVWKEA.

63. The method of claim 61, wherein said synthetic peptide is of 11 to 25 residues in length and comprises the sequence YL(R/K)DQQLLGIWGC, FLGFLGAAGSTMGAASLTLTVQARQ, VYYGVPVWKEA, LWDQSLKPCVKLT, SVITQACSKVSFE, or GTGPCTNVSTVQC.

64. The method of claim 58, wherein said composition comprises a plurality of HIV polypeptides.

65. The method of claim 58, wherein said first HIV polypeptide is coupled to a carrier molecule.

66. The method of claim 65, wherein said carrier molecule is KLH or BSA.

67. The method of claim 58, wherein said composition further comprises an adjuvant.

68. The method of claim 67, wherein said adjuvant is selected from a group consisting of lipids, toxins, cytokines, oligonucleotides or bacterial DNA.

69. The method of claim 58, further comprising administering AZT to said subject.

70. The method of claim 58, further comprising HAART.

71. The method of claim 58, wherein the subject has an HLA-Cw7 haplotype, further comprising:

(c) determining if the subject expresses the HLA-Cw7 haplotype; if so

(d) eliciting said response.

72. The method of claim 71, wherein eliciting said response comprises administering to said subject a therapeutically effective amount of α- or γ-interferon, whereby the level of HLA-Cw7 haplotype expression increases.

73. A method of preventing an HIV-infected subject from developing AIDS comprising:

(a) determining whether said subject exhibits an HLA-Cw7-restricted CTL response; and if so

(b) administering to said subject a composition comprising an expression construct comprising a polynucleotide encoding an HIV polypeptide comprising an HIV CTL epitope, wherein said polynucleotide is under the transcriptional control of a promoter.

74. A method for preventing HIV infection in an uninfected subject comprising:

(a) determining whether said subject has an HLA-Cw7 haplotype; and if so,

(b) administering to said subject a composition comprising an expression construct comprising a polynucleotide encoding an HIV polypeptide comprising an HIV CTL epitope, wherein said polynucleotide is under the transcriptional control of a promoter.

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